Europe’s grid operators brace for capex surge Rising regulated tariffs on enlarged RAB and countermeasures provide longer-term relief

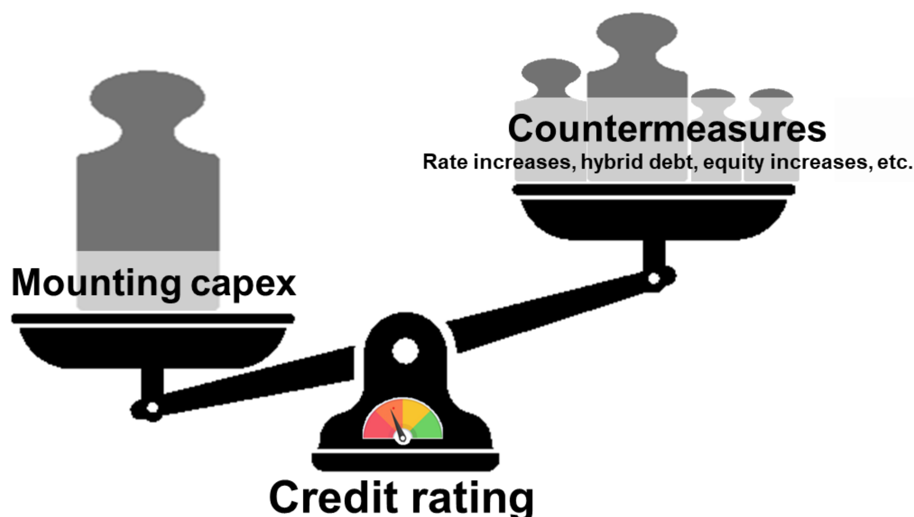
Europe’s grid operators face a financial paradox. Massive spending to adapt electricity networks to the energy transition is straining their balance sheets, but higher regulated returns linked to rising interest rates will complement ad hoc countermeasures taken to cushion the impact.

The catch is that the improved returns on regulatory asset bases (RAB), enlarged by the massive investment underway, will take time to materialise.

Increased remuneration on investments might apply only or mostly to new investments and usually kick in when current regulatory periods end – hence the importance of companies’ recent and continuing efforts to stabilise their finances amid investor nervousness about how extra capital expenditure will be financed.

The scale of the capex challenge varies by country but represents multibillion-euro sums for Europe’s main grid companies in the years ahead, much higher than that invested in recent years. Take Germany. Investment in the transmission grid could amount to EUR 75bn by 2030, according to utility to EnBW AG, which implies an increase of average yearly capex to EUR 9.4bn for the four German transmission grid operators, up 27% from the aggregated amount invested in 2022 (for more details, see **page 3**).

Figure 1: European grid operators trying to offset ratings pressure from mounting capex



Source: Scope Ratings illustration

Indeed, grid operators across Europe, confronted with credit rating downgrades or negative rating outlooks in many cases, have had to various measures to bolster their balance sheets, sometimes with government help. Italy’s Terna SpA, for example, issued large volumes of hybrid debt securities, whose equity component allows the raising of funds while protecting credit ratios. Others have sold non-core assets – Alliander NV, Enexis Holding NV and Red Eléctrica SA – and/or reduced dividend payments.

The Dutch government helped recapitalise TenneT NV. The German government, meanwhile, is discussing to consolidate the fragmented ownership of the country’s transmission grid – TenneT and Belgium’s Elia Group via their subsidiaries operate a major part of the German electricity transmission grid – to strengthen long-term funding.

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Regulators to allow utilities improved returns on investment

Germany's regulator set to jack up return on equity

Rising interest rates have also come to the aid of sector by feeding through to higher regulated tariffs, promising improved returns on the expanding RAB in the medium to long run.

For example, Germany's network regulator, the Bundesnetzagentur, plans tariff increases that would provide a return on equity of around 7.09%, up from the current 5.03%. Regulators in Austria and Switzerland have made similar moves.

Dutch utilities Alliander and Enexis are campaigning for higher regulated tariffs including higher investment remuneration in the Netherlands where they are among the lowest in Europe.

The combination of self-help and rising regulated tariffs – boosting EBITDA and operating cashflow – should to some extent offset the pressure from capex on the utilities' balance sheets. Leverage will creep higher in the years ahead but remain manageable if regulators continue to factor in the huge cost to adapting the transmission and distribution of electricity to a more renewable-energy based economy. However, stronger balance sheet relief from equity injections, particularly for the grid operators in the Netherlands and in Germany that face the highest pressure cannot be ruled out.

Grid operators face huge network overhaul

To that end, grid operators have a long "to do" list: eliminate bottlenecks, integrate rising renewable energy capacity (onshore and offshore), improve interconnections, enhance power balancing and transmission to adapt the network to falling supplies of more reliable and predictable coal- and gas-fired electricity.

Part of the challenge is catching up on underinvestment during the long period of ultra-low interest rates which reduced returns on the RAB as the working average cost of capital (WACC) fell and lowered the incentive to invest. Regulators were slow to adjust tariffs to reflect the hefty future financing requirements before interest rates rose.

Another factor is inflation which is pushing up the cost of new projects – raw materials, logistics, wages – in Europe.

Significant as the overall challenge is of adapting Europe's electricity grid to a low-carbon future, the capex required is spread unevenly across the region. Western and southern European grid operators are more affected than those in the north and east. Belgian, Dutch, German, Italian and Spanish grid operators facing the biggest increases in capex.

Northern Europe's transition is relatively far advanced. Eastern Europe's transition is proving much more sluggish, with still heavy reliance on fossil fuels and imports of Russian oil and natural gas, storing up capex pressure for the more distant future.

Grid operators ramp up capex for energy transition

Environment regulation helps drive capex for energy transition

The ambitious targets set by the EU for environmental goals, notably the net zero carbon-dioxide emissions target by 2050, and other sustainable development have set the context for European utilities' increased investment over the past few years.

The outbreak of the Russia-Ukraine war has also dramatically changed the European energy landscape, with Germany and many other smaller economies historically dependent on Russian natural gas and oil.

With European industry no longer able to rely on Russian supplies, pressure to find alternative sources of energy has created greater impetus for investment in renewable energy which in turn adds to pressure to adapt Europe's electricity infrastructure to accommodate it.

Annual capex rises steeply for leading European TSOs

High investments are required not just to increase generation of renewable power but also to improve the transport of electricity from where it is produced to where it is consumed through eliminating bottlenecks, widening interconnection, improved balancing and strengthening transmission and distribution corridors.

Grid operators – mainly referring to transmission system operators – face an investment challenge made more intense by high inflation and rising construction costs.

- Europe's most affected economy **Germany** will likely face investments for the transmission grid of EUR 75bn by 2030 (acc to EnBW) which implies an increase of annual average capex to EUR 9.4bn for the four German TSOs, TransnetBW, Amprion, 50Hertz and TenneT Germany, up 27% from the aggregated amount invested in 2022.
- The **Dutch** TSO TenneT announced in March 2023 that it will need to almost double annual capex over the next 10 year to at least EUR 8bnfrom EUR 4-5bn over the past few years. While a significant part of that amount relates to the activities of TenneT Germany (~60%), still investment earmarked for the Netherlands is about to double accordingly to about EUR 3.2bn per annum.
- **Italy**'s Terna has presented a record high capex plan for the next 10 years, amounting to EUR 21bn for 2023-2032 (compared with capex of about EUR 11bn over the past 10 years).
- Red Eléctrica (Redeia) which operates the **Spanish** electricity transmission grid has indicated an annual capex volume of more than EUR 900m for the remaining years under its planning horizon 2021-2025 (compared to an average of EUR 480m in the first two years of the horizon).
- In **France**, RTE's 15-year network development plan presented in 2019 identified EUR 33bn for 2021-2025 which translates into annual capex of EUR 2.2bn, roughly 40% higher than the average over the past few years.
- The **UK**'s National Grid has signaled an annual average of GBP 3bn for the period 2022-2026 (total investment need of GBP 15bn) for its UK electricity transmission and distribution assets, compared with an annual average of about GBP 2bn over the past few years.

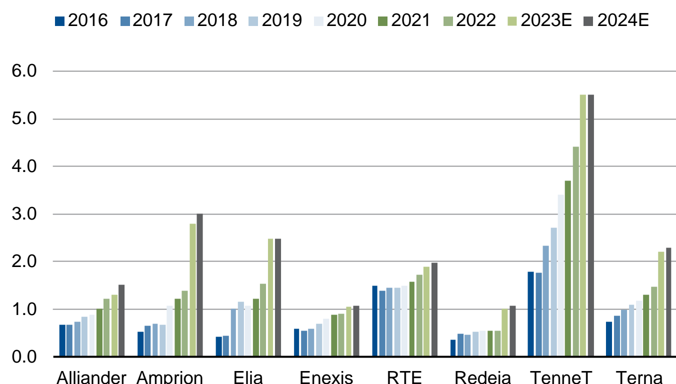
Capex spread unevenly across European countries

However, the required capex is spread unevenly over Europe. Domestic energy resources, regulatory regimes, the size and diversification of utilities and progress towards the energy transition can vary considerably from country to country, with an impact on the required investment need in overhauling electricity networks.

Virtuous examples are Finland, Norway and Switzerland, which boast a clear advantage in the race, deriving from a well-established predominance of certain clean sources for many years now. The countries' respective national TSOs – Fingrid Oyj, Statnett SF and Swissgrid AG – are investing to improve the efficiency of the electricity transmission infrastructure but without sharply increasing capex.

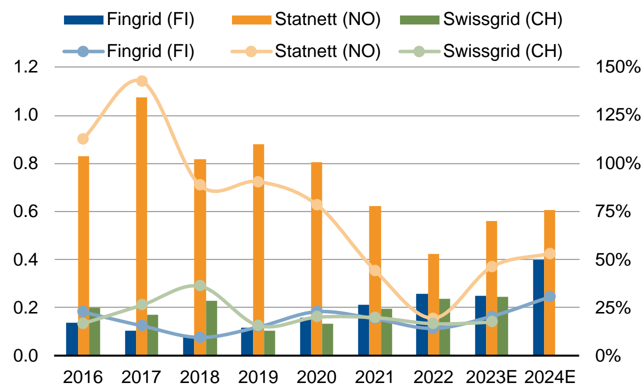
In contrast, capex is rising most quickly for Belgian, Dutch, German, Italian and Spanish utilities, all operators (**Figure 2)** in relatively wealthy countries where the realisation of the importance of energy security since Russia's escalation of its war in Ukraine has focused minds on revamping electricity infrastructure, notably in Germany and Italy.

Figure 2: Net capex (EUR bn) by major European TSOs/DSOs 2016-2024E



Source: Scope Ratings

Figure 3: Net capex (columns, EUR bn) versus net capex/revenue (lines) 2016-2024E



Source: Scope Ratings

Note: 2023 and 2024 projections are sourced from Scope's estimates for covered TSOs and from external sources (i.e. Bloomberg, company guidance) for non-covered TSOs. RTE is the abbreviation of Réseau de Transport d'Electricité. Redeia stands for Red Eléctrica de España.

Eastern Europe less far advanced in energy transition

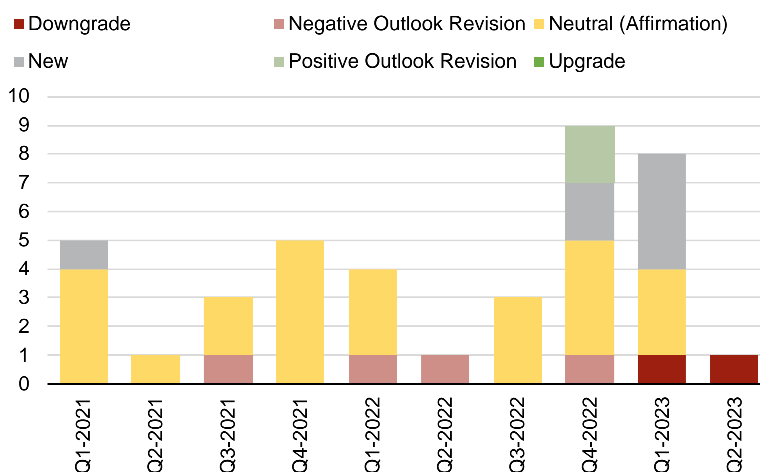
Conversely, Eastern Europe appears to be falling behind the rest of the region in terms of energy-sector capex. Governments have encouraged relatively modest investment in the green transition amid continued reliance on coal and oil particularly by households.

The impact on credit quality

Negative rating pressure

Grid operators in Scope's rating universe have encountered downward pressure on their credit ratings in recent quarters (**Figure 4**) in contrast with the more favourable trend for rating actions on integrated utilities and power generators (European utilities: continued electricity price hedging promises producer gain, consumer pain).

Figure 4: Negative ratings trend within Scope peer group of regulated grid utilities (measured as number of rating actions)



Not including 'Under review placements' due to methodology changes

Source: Scope Ratings
data referring to the 19 grid operators under coverage

Leverage will remain under pressure for the next few years (**Figure 6**), but further negative actions in our rating universe will remain exceptions due to the improving regulatory support and action taken by utilities and their shareholders to bolster their balance sheets.

Europe's grid operators brace for capex surge

Rising regulated tariffs on enlarged RAB and countermeasures provide longer-term relief

Scope covers 19 European, primarily electricity, grid operators across major European jurisdictions.

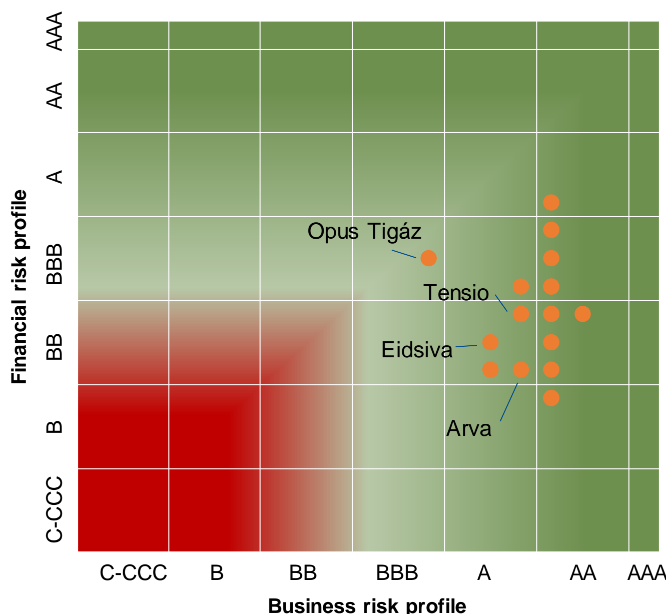
Rated entity	Geographical outreach	Type of grid/network operator	Issuer Rating
2i Rete Gas SpA	IT	Gas DSO	Subscription*
Alliander NV	NL	Electricity DSO	Subscription*
Arva AS	NO	Electricity DSO	BBB+/Stable
Eidsiva Energi AS	NO	Electricity DSO with indirect exposure to power generation	BBB+/Stable
Elering AS	EE	Electricity and gas TSO	Subscription*
Elia Group SA and Elia Transmission Belgium NV	BE/DE	Electricity TSO	Subscription*
Enexis Holding NV	NL	Electricity DSO	Subscription*
Fingrid Oyj	FI	Electricity TSO	Subscription*
Opus Tigáz Zrt	HU	Gas DSO	BBB-/Stable
RTE Réseau de Transport d'Électricité SA	FR	Electricity TSO	Subscription*
Snam SpA	IT	Gas TSO	Subscription*
Statnett SF	NO	Electricity TSO	Subscription*
Tensio AS	NO	Electricity DSO	A-/Stable
TenneT Holding NV	NL/DE	Electricity TSO	Subscription*
Teréga SA	FR	Gas TSO	Subscription*
Terna Rete Elettrica Nazionale SpA	IT	Electricity TSO	Subscription*
Undisclosed	BE	Undisclosed	Private
Undisclosed	BE	Undisclosed	Private
Undisclosed	NL	Undisclosed	Private

* Subscription ratings available on ScopeOne

Limited concern about availability of external funding

Grid operators are natural monopolies. Strong market positions and regulation ensure full cost coverage over time which usually drive strong business risk assessments (**Figure 5**) but also their status as government-related entity in most cases.

Figure 5: Still ratings are well supported by solid assessment of business risk profiles

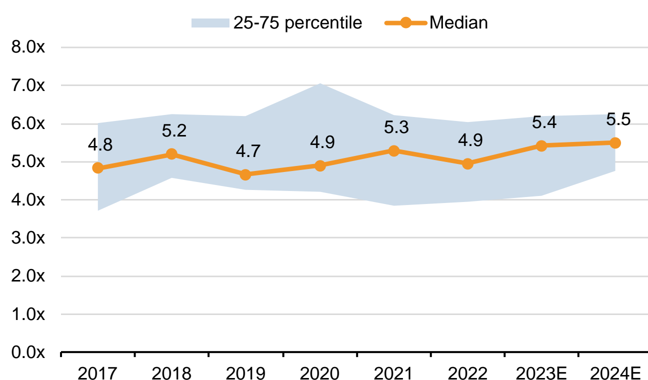


Orange dots represent combinations of business and financial risk profiles of regulated grid operators (without GRE considerations)

Source: Scope Ratings

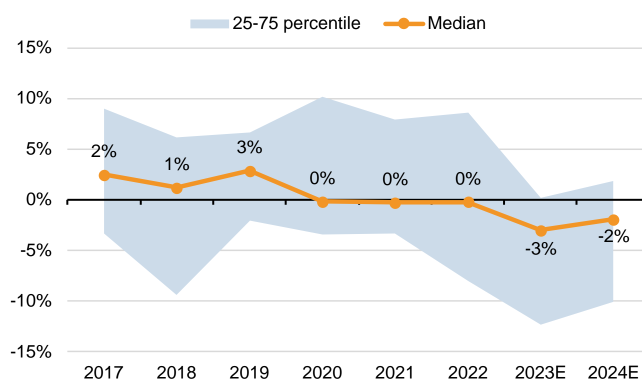
Hence, we are less concerned about rising leverage levels in the context of external funding requirements. Affected utilities usually benefit from solid access to a wide array of external funding channels.

Figure 6: Upward pressure on leverage (Scope-adjusted debt/Scope-adjusted EBITDA) …



Source: Scope Ratings
data referring to the 19 grid operators under coverage

Figure 7: … and downward pressure on cash flow cover (Free operating cash flow/Scope-adjusted debt)



Source: Scope Ratings
data referring to the 19 grid operators under coverage

Credit ratings gain in importance as low-interest-rate era ends

Considering the extended period of mounting capex and rising needs for external funding, grid operators have already become more sensitive to protecting their investment-grade ratings which become more important for determining funding costs as interest rates rise.

Relief is in sight in the medium to long term from:

- Rising interest rates
- Countermeasures by utilities with highest ratings pressure: e.g., issuing hybrid bond, cutting dividends, spreading out capex, selling non-core assets
- Government support, e.g., equity injections

Rising interest rates provide credit support to grid operators

Grid operators benefit from rising interest rates

The end of the low-interest era has led to increasing pressure for many companies, e.g. by raising the bar for new investment and putting pressure on interest coverage through the gradual increase of average corporate interest rates.

However, the situation is very much the opposite for regulated grid operators. Grid operators typically benefit from rising interest rates because the return on investment allowed by the regulator usually reflects a WACC that considers the cost of debt and equity. Rising interest rates provide a stronger incentive to invest but also to maintain existing infrastructure, as action underway by regulators in Europe suggests:

- German regulator BNetzA has recommended a revision of the applicable pre-tax return on equity which is part of the WACC that can be applied to the RAB stemming from new investments for the next regulatory period 2024-2028 to 7.09% (pre-tax) from 5.07% (pre-tax). The regulator plans to revise applicable interest rates annually.
- Swiss regulator UVEK has revised upwards the applicable WACC for 2024 to 4.13% after it had been kept at 3.83% for six years.
- Austrian E-control raised the WACC for new investments of gas network operators to 4.88% from 3.72% from 2023 onwards and made upwards revisions to the WACC for new investments for electricity grid operators for the next regulatory period starting in 2024.

- In the Netherlands, Dutch regulated grid operators, such as Alliander and Enexis, have appealed to the Dutch Administrative Court for Trade and Industry over the Dutch regulator's setting of what they see as an inappropriate WACC as well as an inappropriate assessment of operating costs. In fact, the Netherlands has some of the lowest remuneration rates among European grid operators while interest rates are fixed in the currently regulatory period until 2026.

More upwards revisions and even appeals on existing or revised remuneration rates can be expected over the next few months as the European Central Bank and other European central banks continue to raise rates.

Interest rates are reflected in RAB remuneration

Regulators typically assure utilities full recovery of interest costs over time as regulatory frameworks for setting of grid tariffs reflect central bank or market rates.

A rising base rate and thus higher applicable debt and equity cost coupled with a growing regulated asset base as investment rise will likely increase achievable margins and cash flow, even when higher tariffs apply only to new investments.

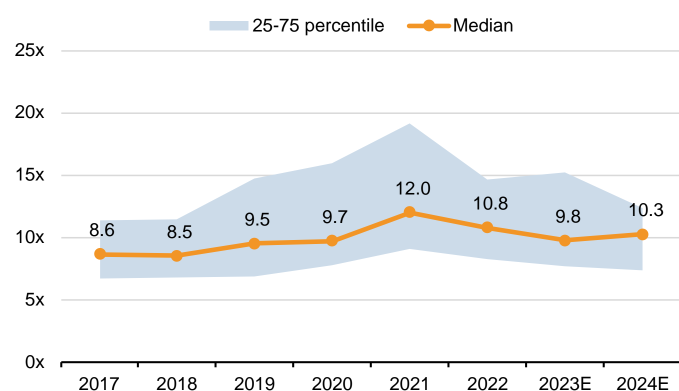
Grid users therefore face rising costs as tariffs reflect higher interest rates and operators passing on of other inflation-relate cost increases. What is clear is the growing cost for grid users over the next few years, reflecting not only the effect of rising interest rates but also the inflation on operating cost. Nonetheless, it is the effect of interest cost that support rising operating cash flow given the pass-through nature of operating cost.

Paradox of contained leverage as debt, interest costs rise

Rising returns on investment will likely provide support to grid operators' interest coverage – measured by a Scope-adjusted EBITDA / Scope-adjusted net interest in our rating methodology – despite the pressure on leverage and FOCF.

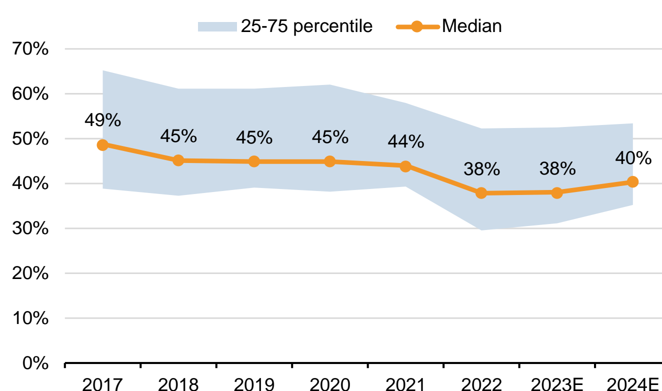
This is the paradox of a regulated industry where debt and absolute interest costs are rising. We can take for granted that cost of debt and operating expenditure will be fully covered on average. Rising EBITDA margins over the next few years – which however we expect to materialise only gradually (**Figure 9**) – and growing EBITDA will likely improve interest coverage which on average has been solid in the sector, running at a median coverage ratio of close to 10x (**Figure 8**).

Figure 8: Interest coverage remains comfortable (Scope-adjusted EBITDA / Scope-adjusted interest)



Source: Scope Ratings
data referring to the 19 grid operators under coverage

Figure 9: EBITDA margin has bottomed out



Source: Scope Ratings
data referring to the 19 grid operators under coverage

Easing balance-sheet pressure comes with delay

Nonetheless, there is a caveat. Investment and a higher return on such investment will only pay out in the medium to long term.

First, the effect from rising interest rates on operating cash flow will in many cases apply only to new investment, potentially not or only to a limited extent on existing infrastructure. This implies that absolute improvements will only emerge gradually.

Secondly and more importantly, improved remuneration on the regulated asset base depends on the length of the current regulatory period and the flexibility of a regulator to allow amendments to applicable cost of capital during an ongoing regulatory period.

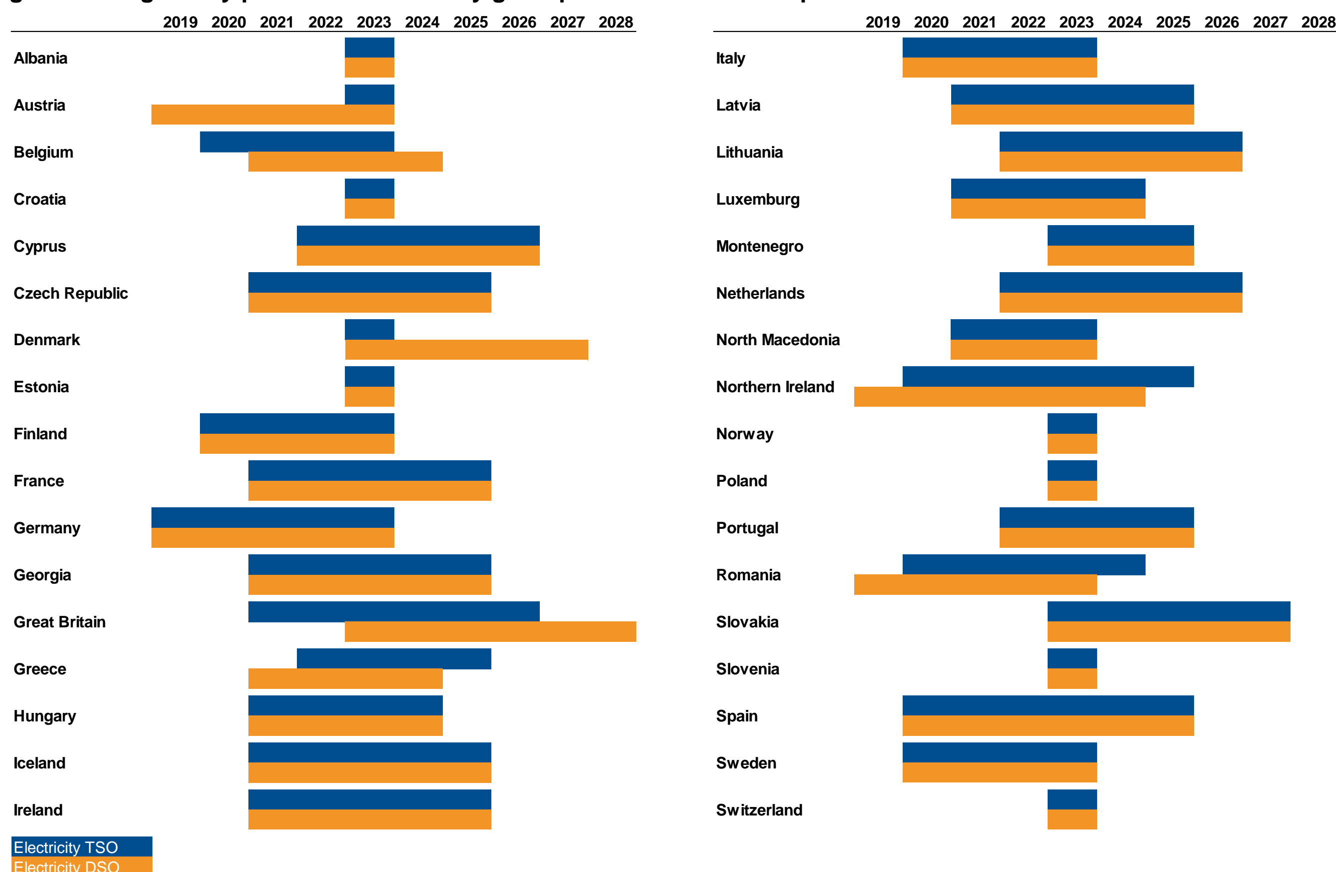
Regulatory periods for which the underlying parameters such as applicable cost of capital have been determined, typically last for 4 or 5 years (**Figure 10**).

Only a few national regulators such as DUR in Denmark, Konkurentsiamet in Estonia, NVE-RME in Norway, URE in Poland or Energy Ageny in Slovenia provide frameworks that allow annual adjustments to changed market conditions.

Grid operators for whom the cost of capital is fixed for the next few years before central banks started to raise benchmark rates will have to wait until the end of the current regulatory period. Unless the regulators show some flexibility to adjust the parameters during the regulatory period to cater for the changed environment, some grid operators will until 2026/2027 before they benefit from improved cashflow.

Nonetheless, given current market dynamics and constant dialogues between regulators and grid operators in markets with longer regulatory periods such as in the Netherlands, we believe that there are also good chances for advantageous tariff revisions that cater for the changed interest rate environment before the next regulatory periods start.

Figure 10: Regulatory periods for electricity grid operators across Europe



Source: CEER – Council of European Energy Regulators, Scope Ratings

Countermeasures to offset near-term rating pressure

A) Financial policy and external funding

Financial policy adapts to meet capex pressure

Corporate treasurers will need to use all available funding tools to protect credit ratings near term, a challenge during a phase of debt-funded investment growth. Shareholder support will be crucial.

We would expect more conservative shareholder remuneration – flat or lower dividends; no share buybacks – or as the last resort raising of fresh equity.

Funding via subordinated (hybrid) debt can also be a solid option. Italy's Terna placed an inaugural hybrid bond in February 2022.

However, this way containing leverage has become less popular. Elia's latest hybrid debt placement for the refinancing of another hybrid in March 2023 carried a coupon of 5.85% (significantly higher than the 2.75% coupon of the redeemed hybrid bond).

Nonetheless, we expect continued hybrid debt issuance in selected cases for utilities that derive stronger ratings support from protecting their leverage than in lost interest cover. Utilities with high interest coverage of more than 7x can afford continued hybrid usage at higher interest cost.

Another option is the placement of convertible shareholder loans, as in the cases of Alliander and Enexis, as such borrowing benefit from treatment as hybrid debt in our rating approach. The loans could be converted into equity at the discretion of the debtors should their rating come under too much pressure.

A last resort is direct support from old and potentially new shareholders which could provide immediate relief to leverage, and ratings pressure as seen. Dutch TenneT has already received EUR 1.23bn equity injection from the Dutch State in 2022 with another EUR 3.9bn equity injections budgeted by YE 2025. Dutch DSO Stedin Holding NV maintained its credit rating partly through a EUR 200m equity injection from shareholders in 2021. In addition, Stedin and Dutch peers Alliander and Enexis have a promise of Dutch government equity support if their credit ratings deteriorate too severely.

B) Non-core asset disposals provide immediate support

Quick fix to support capex and leverage

Asset disposals can be the most effective solution in terms of timing to support capex coverage and consequently containing if not reducing leverage. This provides immediate relief to the balance sheet or long-term relief when the overall grid exposure is reduced with associated relief for the future funding of capex.

Germany prepares overhaul of how national grid is run

The potential for asset disposals is sometimes limited but grid operators facing the greatest rating pressure have taken this route. Other big-ticket transactions are likely in the pipeline.

- Alliander initiated the sales process for metering company Kenter, a deal due to close in mid-2023
- Enexis sold energy services business Fudura in H1 2022
- Red Eléctrica de España disposed of 49% stake of its fibre optics business Reintel in H1 2022
- National Grid completed sale of UK gas transmission and metering business sale in Q1 2023
- Terna sold its Latin American power transmission business in H1 2022

- Germany’s integrated utility EnBW which held the entire share of the Southwest German TSO TransnetBW sold a stake of 24.9% in the grid operator in H1 2023 in order to cash in funding for the capex of the TSO
- TenneT remains in talks to dispose its German grid assets, which would improve its balance sheet sufficiently to likely avoid rating downgrades

Conclusion

We conclude that the ratings pressure will likely persist for selected TSOs and DSOs, particularly in Germany and the Netherlands. The longer and steeper the capex phase will weigh on a grid operator’s free operating cash flow and leverage, the more likely it will be to see equity contributions and/or major organisational restructurings, i.e. mergers or asset disposals. We believe that stakeholders, in particular sovereigns and sub-sovereigns, will stand by to support most affected utilities in order to avoid delaying the energy transition when grid operators have to be spread over a longer time period.

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